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W. E. H

An Essay on Scilla Maritima or Squill By Ransom Tuggle Georgia

No 2

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Scilla Maritima or Squill is a perennial bul-bous-rooted plant, that grows naturally on the sea shore or in ditches where the salt water flows in with the tide. It flourishes and grows in the warm parts of Europe, and particularly on the sandy shores in Spain and in the Levant, from whence there is an annual supply of them.

The bulbs of this plant are the parts used in Medicine. Of these bulbs there are two kinds, the red and the white, which are supposed to be accidental varieties but for medicinal use, the red is gener-ally prefered, as it has been supposed to be more efficacious than the other. The bulbs should be chosen large, plump, fresh and full of a clam-my juice. The squill may be preserved fresh in sand, but as they are apt to spoil, it is best to keep them in a dried state.

The root of the squill is about the size of the fist, and of a pear shape, with the apex

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upwards and consists of fleshy scales attenuated at both edges, surrounded by other scales, which are arid shining, and so thin that the root at first sight appears to be tunicated.
The recent roots have scarcely any smell, but the taste is extremely acrid nauseous and bitter.
It is more commonly met with in the shops in the form of dried scales, which should be brittle, semipellucid, smooth, but marked with lines, and should when chewed, feel tenacious and bitter to the taste; without any manifest acrimony.
The most convenient way of drying the squill is, after having peeled off the outer skin, to cut the bulb transversely into thin slices - These are to be dried on a sieve with a gentle heat.
By this method the squill dries much sooner, than when its several coats are only separated.
The internal part being here laid bare, which in each of the entire coats, is covered with a thin skin,

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The root loses in this process about four fifths of its original weight. The parts which exhale with a moderate heat, appear to be merely watery, hence six grains of the dry root are equal to half a dram of the fresh root, a circumstance to be particularly regarded in the administration of this medicine. But if too great heat has been employed to dry the squill it becomes almost inert and it also loses by long keeping in a state of powder — The medicinal properties of the squill appear to depend upon a peculiar bitter principal, which exists in them to which Chemists have given the name of scillitin. The properties of this substance were investigated in eighteen hundred and twelve by Vogel, who pointed out its peculiar nature and gave it the name by which it is distinguished. The method by which he obtained it is as follows. The juice of the fresh bulbs being expressed was boiled for a few minutes and a quantity of citrate of lime, which appeared

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was separated. It was then evaporated to dryness, and the dry residue digested in alcohol as long as that liquid took up any thing. The alcoholic solution was evaporated to dryness, and the residue (which consist of scilliten and tannin) was redissolved in water. Acetate of lead was dropped in to throw down the tannin, the liquid was filtered, and the excess of lead which had been added was separated by means of a current of sulphuretted Hydrogen gas. The liquid being again filtered was evaporated to dryness to drive the acetic acid from the acetate. The dry mass was scilliten mixed with a little sugar, from which it was not in Vogel's power to separate it. Scilliten thus obtained, is white and transparent, and breaks with a resinous fracture. It is easily reduced to powder, absorbs water rapidly from the atmosphere, and becomes at first viscid mass and at last quite fluid. Its taste is intensely bitter, leaving a slight

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impression of sweet from the sugar with which it is mixed. It dissolves readily in water giving it a mucilaginous consistence like gum. It dissolves very readily in cold alcohol of 0.817 and still more readily in that liquid when hot.

The root of the squill has been known in medicine in the early ages of Greece so that the introduction of its medical use has been refered by some to Epimenides and by others to Pythagoras. It is noticed by Dioscorides, Hippocrates Galen Pliny and Celsus, and also by the Arabian Physicians. Its medical character has been retained ever since to such a degree, that it is still deservedly held in high estimation and frequently used. It seems, however, to manifest a poisonous quality to several animals, as medical writers have testified. If administered in large and repeated doses, it not only excites nausea, torpid and violent vomitings, but it has been known to produce strangury, bloody urine,

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hypercathersis, cardialgia, haemorrhoids, convulsions with fatal inflammation, and gangreen of the stomach and bowels. Nevertheless under proper management and in certain cases and constitutions, fitness its recommendation as a medicine of great practical utility, and real importance in the cure of many chronic diseases. In small doses, it is expectorant and diuretic; but in large doses, it proves emetic and purgative. But when these latter effects take place, the medicine is prevented from reaching the blood vessels and kidneys, and the patient derives no benefit from its diuretic efficacy. In such cases it should be given in smaller doses and at longer intervals, or an opiate should be joined with it, which according to Doctor Cullen, will answer the same purpose. By repeated use, the dose may be increased, and the intervals of administering it diminished, and, accordingly when the doses are tolerably large, the opiate may be most conveniently

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employed to direct the operation of the squill, more certainly to the kidneys. In cases of dropsy, he says, where there is an effusion of water into the cavities, and, therefore, less water passes to the kidneys, neutral salt accompanying the squill, may be of use in determining it more certainly to the kidneys, and when it is perceived to take this course, he is persuaded, that it will be always useful and generally ~~safe~~ during the exhibition of the squills to increase the usual quantity of drink. The diuretic effects of the squills have been supposed to be promoted by the addition of some mercurial, and Doctor Cullen is of opinion, that the less purgative preparations of mercury, are best adapted to this purpose. Accordingly he recommends a solution of corrosive sublimate or oxymuriate of mercury, as the most proper because it is the most diuretic. Wagner recommends the powder of squills, given with nitre, in hydropical

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swellings, and in nephritis, and mentions several examples of cures, which he performed by giving patients from four to ten grains, with a double quantity of nitre. When squills have been employed as a diuretic, it has been usual to give it in powder; because, in this state, it is less apt to produce nausea, and it has been customary to add neutral salts as nitre, or crystals of tartar; especially, if the patient complains of much thirst. Others recommend calomel; and with a view to render the squills less offensive to the stomach, it has been usual to add some aromatic. In asthmatic affections or dyspnoea, occasioned by the lodgement of tenacious phlegm, oppressing the lungs, or when the primae viae abound with mucous matter, it has been the expectorant usually employed, and held in high estimation. As an expectorant, the squill may be supposed not only to attenuate the mucous matter and thus

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to facilitate its expulsion, but, by stimulating the excretory organs, and mucous follicles, to excite a more copious excretion of it from the lungs and thereby lessen the congestion, upon which the difficulty of respiration very generally depends. Hence in all pulmonic affections, excepting only those of actual or violent inflammation, ulcer and spasm, the squill has been found to be a very useful medicine. It is rendered more useful as an expectorant, when combined with nitrate of potash, tartarised antimony, or Ipecacuanha, and in asthma and dyspnoea, without fever, squill combined with ammoniacum is perhaps the best remedy that we can employ.

As an emetic the squill is very uncertain in its effects, producing in some persons the most severe vomiting, and in others producing no nausea at all, even in the largest doses.

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it proves more useful in hoopingcough and croup, than any other emetic which we can administer. To produce an emetic effect, the squill must be given in the form of an infusion, in vinegar, or, what is still better, is a preparation which is found in the shops in the form of an oxymel of squills. The vinegar of squills has long been used as an expectorant and diuretic in chronic catarrh, asthma and dropsies. In large doses it proves emetic and is occasionally used to produce vomiting in the above mentioned diseases especially when the stomach is loaded —

A preparation of this medicine held in high estimation by the Profession, is that combination under the title of hive syrup, in which this article forms a principal ingredient. Indeed in certain cases of children, as hoopingcough measles, &c we could find no substitute for it and very deservedly does it maintain the reputation it

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To the Proffessor of Materia Medica in the university of Pennsylvania do we owe, the discovery and original preparation of this Medicine.